

Common Sense Initiative, Automobile Manufacturing Sector

***U.S. Automobile Assembly Plants and Their Communities:
Environmental Economic, and Demographic Profile***

**Part III: Automobile/Light Duty Truck Assembly
Plant-Community Profiles**

**42. Ford Motor Co.
Avon Lake, OH**

December 1997

Contents and Guidelines for Use

Users of this profile should carefully review the description of methods, data limitations, and guidelines for use and interpretation of the data presented in Part I of the report.

Contents:

Plant Locations (National and Michigan maps)
Plant Location, Database Identification Numbers, 1994 Production and Employment
1991 and 1993 RCRA Biennial Report Summary
1991-1994 TRI Releases and Transfers Summary
1994 TRI Releases and Transfers by Chemical
1991-1994 Volatile Organic Compound and Nitrogen Oxide Emissions
1994 Summary of TRI Chemical Releases and Transfers from Sources within 3 Miles of Assembly Plant
Air Quality Attainment Status for Criteria Pollutants (as of 1994)
Community Demographic and Economic Characteristics
Facility Location (map)
Area Wide 1994 TRI Emission Profile (map)
1994 TRI Releases and Transfers from Sources within 3 Miles of Assembly Plant, by Chemical
Demographic Characteristics (maps)

General Guidelines for Use

Efforts have been made to ensure that the data presented here are accurate. The Project Team could not independently verify data accuracy in all cases, however, and some errors may remain. The following is a partial list of factors that should be considered in using these profiles:

1. Current releases presented in this report represent only some of the contamination sources in a given area. Data on historical releases (prior to 1991) were not included, and releases from non-assembly plant emission sources were identified only through the Toxics Release Inventory (TRI). TRI data do not cover all sources of releases. Considering only TRI data for a given community may mis-state the relative contribution of plants and their neighboring TRI facilities to an area's total releases.
2. Care must be taken to distinguish true changes over time in environmental releases from apparent changes, due, for example, to changes in the scope of reporting requirements.
3. TRI data are often based on engineering estimates and are reported on an annual basis. Data on releases over shorter time frames are not available.
4. TRI, the Biennial Report and other databases do not include all substances and environmental releases of concern.

Notes on Comparisons Across Facilities

1. The following factors can affect an assembly plant's environmental profile, among other things: the number of vehicles produced, plant age, process equipment age, and vehicle size and configuration.
2. Some plants are highly-integrated, performing some parts and all assembly steps in-house. Others obtain parts from other manufacturing facilities, or share assembly operations with another plant.
3. States differ in how they define hazardous waste and how they treat recycled wastes and small quantity generators. Therefore, data on quantities of BRS wastes generated may not be comparable for plants located in different states.
4. Area-wide averages for economic and demographic characteristics may be better or worse measures of the plant's immediate community, depending on the specific location of a plant within the reporting area.

Plant-Community Profile:
Ford Motor Co.
Avon Lake OH

1/22/98

LOCATION	Address	650 Miller Rd., Avon Lake OH 44012		DESCRIPTION	Plant in 1974; produced Mercury Villager and Nissan Quest Van in 1994.	
	Lat/Long:	latitude (degrees N)	41 29' 7"			
		longitude (degrees W)	82 3' 50"			
	County:	Lorain	MSA: Cleveland-Lorain-Elyria OH	ID NUMBERS	RCRA ID	OHD020626669
	Other counties within 3 miles of plant:				AIRS ID	AFS3909300056
OPERATIONS			Cuyahoga		NPDES ID	OHR000002
					TRI	44012FRDMT650MI
		Production	Employment			
	Calendar Year: 1991	0				
	1992	39,266				
	1993	142,412				
	1994	153,786	3,440			

PLANT ENVIRONMENTAL PROFILE

RCRA BIENNIAL REPORT

<i>Waste Code(s)</i>	<i>Wastewater?</i>	<i>Physical Form</i>	<i>Source</i>	<i>Mgd. On/Off-Site</i>	<i>Management Method</i>	<i>Quantity Generated (tons)</i>	<i>Quantity Shipped (tons)</i>	<i>Quantity Mgd. On-Site (tons)</i>
<i>1991</i>								
D001 (ignit) F002, F003, F005 (solvents)	?	Not rep't	Not rep't	Off	Not rep't	18.3	18.3	0.0
D001 (ignit) F001, F003, F005 (solvents)	?	Not rep't	Not rep't	Off	Not rep't	213.2	213.2	0.0
D001 (ignitable)	?	Not rep't	Not rep't	Off	Not rep't	505.6	505.6	0.0
D001 (ignitable)	?	Not rep't	Not rep't	Off	Not rep't	90.0	90.0	0.0
1(ignit) D018 (benzene) D039 (tetrachlrethyl	?	Not rep't	Not rep't	Off	Not rep't	0.1	0.1	0.0
D001(ignit) F003, F005 (solvents)	?	Not rep't	Not rep't	Off	Not rep't	65.1	65.1	0.0
D001(ignit) F003, F005 (solvents)	?	Not rep't	Not rep't	Off	Not rep't	10.8	10.8	0.0
D002 (corrosive)	?	Not rep't	Not rep't	Off	Not rep't	2.6	2.6	0.0
D002 (corrosive)	?	Not rep't	Not rep't	Off	Not rep't	6.2	6.2	0.0
D002 (corrosive) D009 (mercury)	?	Not rep't	Not rep't	Off	Not rep't	0.5	0.5	0.0
D008 (lead)	?	Not rep't	Not rep't	Off	Not rep't	37.0	37.0	0.0
D008 (lead)	?	Not rep't	Not rep't	Off	Not rep't	25.8	25.8	0.0
TOTAL - 1991						975.3	975.3	0.0
<i>1993</i>								
D001 (ignitable)	?	Not rep't	Not rep't	Off	Not rep't	4.3	4.3	0.0
D001(ignitable) D018 (benzene)	?	Not rep't	Not rep't	Off	Not rep't	0.4	0.4	0.0
D001(ignitable) D035 (MEK)	?	Not rep't	Not rep't	Off	Not rep't	24.0	24.0	0.0
D001(ignitable) F003 (solvents)	?	Not rep't	Not rep't	Off	Not rep't	0.3	0.3	0.0
D001(ignitable) F003 (solvents)	?	Not rep't	Not rep't	Off	Not rep't	1,070.5	1,070.5	0.0
D001(ignitable) F003 (solvents)	?	Not rep't	Not rep't	Off	Not rep't	214.3	214.3	0.0
D001, D005, D007, D008	?	Not rep't	Not rep't	Off	Not rep't	8.9	8.9	0.0
D001, D005, D007, D008, F003	?	Not rep't	Not rep't	Off	Not rep't	80.9	80.9	0.0
D001, D005, D007, D008, F003	?	Not rep't	Not rep't	Off	Not rep't	189.6	189.6	0.0
D001, D007, D008	?	Not rep't	Not rep't	Off	Not rep't	0.9	0.9	0.0
D001, D008, D039	?	Not rep't	Not rep't	Off	Not rep't	0.9	0.9	0.0
D001, D018, D039	?	Not rep't	Not rep't	Off	Not rep't	1.5	1.5	0.0
D001, D035, F003, F005	?	Not rep't	Not rep't	Off	Not rep't	5.3	5.3	0.0

(continued)

Plant-Community Profile:
Ford Motor Co.
Avon Lake OH

12/16/97

PLANT ENVIRONMENTAL PROFILE (continued)

RCRA BIENNIAL REPORT (continued)

Waste Code(s)	Wastewater?	Physical Form	Source	Mgd. On/Off-Site	Management Method	Quantity Generated (tons)	Quantity Shipped (tons)	Quantity Mgd. On-Site (tons)
<i>1993 (continued)</i>								
D006 (cadmium)	?	Not rep't	Not rep't	Off	Not rep't	0.2	0.2	0.0
D008 (lead)	?	Not rep't	Not rep't	Off	Not rep't	9.5	9.5	0.0
D008 (lead)	?	Not rep't	Not rep't	Off	Not rep't	1.4	1.4	0.0
D008 (lead) D009 (mercury)	?	Not rep't	Not rep't	Off	Not rep't	0.5	0.5	0.0
D009 (mercury)	?	Not rep't	Not rep't	Off	Not rep't	0.2	0.2	0.0
D018 (benzene)	?	Not rep't	Not rep't	Off	Not rep't	0.9	0.9	0.0
D018 (benzene)	?	Not rep't	Not rep't	Off	Not rep't	0.2	0.2	0.0
F002 (halog. solvents)	?	Not rep't	Not rep't	Off	Not rep't	1.1	1.1	0.0
F003 (non-halog solvents)	?	Not rep't	Not rep't	Off	Not rep't	0.7	0.7	0.0
F003 (non-halog solvents)	?	Not rep't	Not rep't	Off	Not rep't	0.3	0.3	0.0
F003 (non-halog solvents)	?	Not rep't	Not rep't	Off	Not rep't	1.0	1.0	0.0
TOTAL - 1993						1,617.6	1,617.6	0.0

TOXICS RELEASE INVENTORY

	Air-Fugitive Emissions	Air-Stack Emissions	Total Releases	Discharge to POTW	Off-Site Energy Recovery	Off-Site Recycling	Off-Site Treatment	Off-Site Disposal	Total Transfers
Total lbs of TRI chemicals:									
1991	7,169	598,360	605,529	22,260	141,300	187,330	18,071	11,300	380,261
1992	25,396	652,216	677,612	27,532	92,852	392,440	22,951	9,060	544,835
1993	9,421	385,051	394,472	9,881	58,076	614,370	21,941	16,425	720,693
1994	12,828	986,156	998,984	46,981	28,773	1,321,870	18,443	30,540	1,446,607
Lbs. per vehicle produced:									
1991	-	-	-	-	-	-	-	-	-
1992	0.65	16.61	17.26	0.70	2.36	9.99	0.58	0.23	13.88
1993	0.07	2.70	2.77	0.07	0.41	4.31	0.15	0.12	5.06
1994	0.08	6.41	6.50	0.31	0.19	8.60	0.12	0.20	9.41

Plant-Community Profile:
Ford Motor Co.
Avon Lake OH

12/2/97

PLANT ENVIRONMENTAL PROFILE (continued)

1994 TRI Emissions/Releases by Chemical (lbs.)

Chemical Name	Air-Fugitive Emissions	Air-Stack Emissions	Total Releases	Discharge to POTW	Off-Site Energy Recovery	Off-Site Recycling	Off-Site Treatment	Off-Site Disposal	Total Transfers
METHANOL	1,200	65,000	66,200	0	750	0	0	0	750
N-BUTYL ALCOHOL	730	140,000	140,730	0	1,750	78,000	0	0	79,750
BENZENE	0	50	50	0	11	0	0	0	11
METHYL ETHYL KETONE	5,000	22,000	27,000	0	720	25,000	0	0	25,720
1,2,4-TRIMETHYLBENZENE	8	1,600	1,608	0	550	27,000	0	0	27,550
ETHYLBENZENE	130	26,000	26,130	0	2,815	150,000	0	0	152,815
ETHYLENE GLYCOL	0	0	0	2,100	0	870	0	0	2,970
METHYL ISOBUTYL KETONE	470	93,000	93,470	0	5,150	260,000	0	0	265,150
TOLUENE	140	28,000	28,140	0	560	13,000	0	0	13,560
CYCLOHEXANE	0	2	2	0	22	0	0	0	22
PROPYLENE	0	5	5	0	0	0	0	0	0
DI(2-ETHYLHEXYL) PHTHALATE	0	0	0	0	0	0	1,600	0	1,600
XYLENE (MIXED ISOMERS)	2,300	450,000	452,300	0	14,300	730,000	0	0	744,300
METHYL TERT-BUTYL ETHER	0	490	490	0	55	0	0	0	55
ANTIMONY COMPOUNDS	0	0	0	1	0	0	1,093	10	1,104
BARIUM COMPOUNDS	0	9	9	110	0	0	3,027	980	4,117
GLYCOL ETHERS	2,600	160,000	162,600	38,000	2,090	38,000	0	0	78,090
LEAD COMPOUNDS	0	0	0	420	0	0	1,113	3,800	5,333
MANGANESE COMPOUNDS	0	0	0	4,100	0	0	5,300	8,400	17,800
NICKEL COMPOUNDS	0	0	0	950	0	0	1,200	1,950	4,100
ZINC COMPOUNDS	250	0	250	1,300	0	0	5,110	15,400	21,810
TOTAL	12,828	986,156	998,984	46,981	28,773	1,321,870	18,443	30,540	1,446,607

VOC/NOx Emissions:
(lbs/year)

	VOCs	NOx
1990	1,864,580	20,080
1991	NA	NA
1992	NA	NA
1993	NA	NA
1994	NA	NA

Plant-Community Profile:
Ford Motor Co.
Avon Lake OH

12/2/97

COMMUNITY ENVIRONMENTAL PROFILE

TRI Chemical Releases & Transfers from Sources Within 3 Miles of Auto/LDT Plant (lbs.)

<i>Facility (w. map #)</i>	<i>Air-Fugitive Emissions</i>	<i>Air-Stack Emissions</i>	<i>Total Releases</i>	<i>Discharge to POTW</i>	<i>Off-Site Transfers</i>	<i>Total Transfers</i>
[none]						

**Air Quality Attainment Status
(as of 1994)**

ozone - nonattainment (moderate)*
carbon monoxide - attainment or unclassifiable
particulates - unclassifiable
lead - unclassifiable
NO2 - cannot be classified or better than national standards
SO2 - attainment

* redesignated attainment effective 5/7/96 (61 FR 20458)

**Plant-Community Profile:
Ford Motor Co.
Avon Lake OH**

12/2/97

COMMUNITY DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

	<i>Census Block</i>	<i>0-1 Mile</i>	<i>0-3 Miles</i>	<i>1-3 Miles</i>	<i>3-5 Miles</i>	<i>County</i>	<i>State</i>	<i>U.S.</i>
Total Population (1994)	NA	NA	NA	NA	NA	279,408	11,102,268	260,340,990
Total Population (1990)	126	337	16,246	15,909	29,171	271,126	10,847,115	248,709,873
% Change 1990-1994	NA	NA	NA	NA	NA	3	2	5
Total Area (sq. mi.) (1990)	2.6	3.1	28.2	25.1	50.2	492.6	40,952.6	3,536,278.1
Population/sq. mi. (land area) (1990)	49	138	910	1,032	1,092	550	265	70
Median Household Income (1994)						NA	31,855	32,264
Median Household Income (1989)						31,098	28,706	30,056
% Change 1979-1989 (constant \$)						-9	-4	7
% Change 1989-1994 (constant \$)						NA	11	7
Per Capita Personal Income (1993)						18,200	19,696	20,800
Per Capita Personal Income (1989)						15,441	16,644	17,690
% Change 1989-1993 (current \$)						18	18	18
Minority Percentage (1990)	0	2	0	0	11	10	12	20
Pct. of Households Below Poverty Level (1989)	25	10	7	7	19	28	24	20
Pct. Not Completing High School (1990)	26	20	19	19	25	24	23	25
Total Employment (1994) (civilian nonfarm)						134,091	5,537,000	131,056,000
Unemployment Rate (1994)						6	6	6
Manufacturing Employment (1993)						29,217	1,046,039	18,183,381
Mfgr. as % Total Employment (1993)						35	25	19
Manufacturing Employment (1992)						NA	1,046,000	18,253,000
Production Workers (1992)						NA	681,000	11,654,000
% Change in Mfgr. Employment 1987-1992						NA	-5	-4
Assembly Plant as % Total Mfgr. Workers						12		

Data sources used were not always complete or current.
Attempts have been made to verify data, but errors may still exist.

Avon Lake, OH, Ford Plant



Microsoft Expedia

Streets98

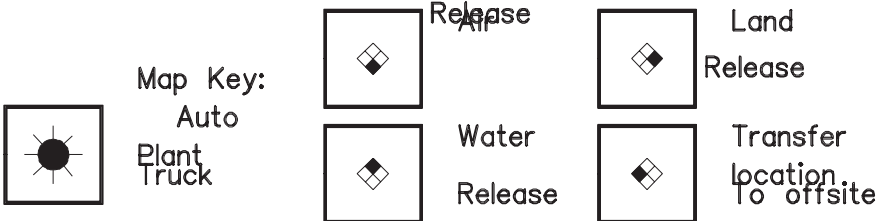
FORD MOTOR CO
650 MILLER RD
AVON LAKE OH
Tri Number: 44012FRDMT650MI

Map #	SIC	Name	Address	City	State
0	3711	FORD MOTOR CO. OHIO ASSEMBLY PLANT	650 MILLER RD.	AVON LAKE	OH

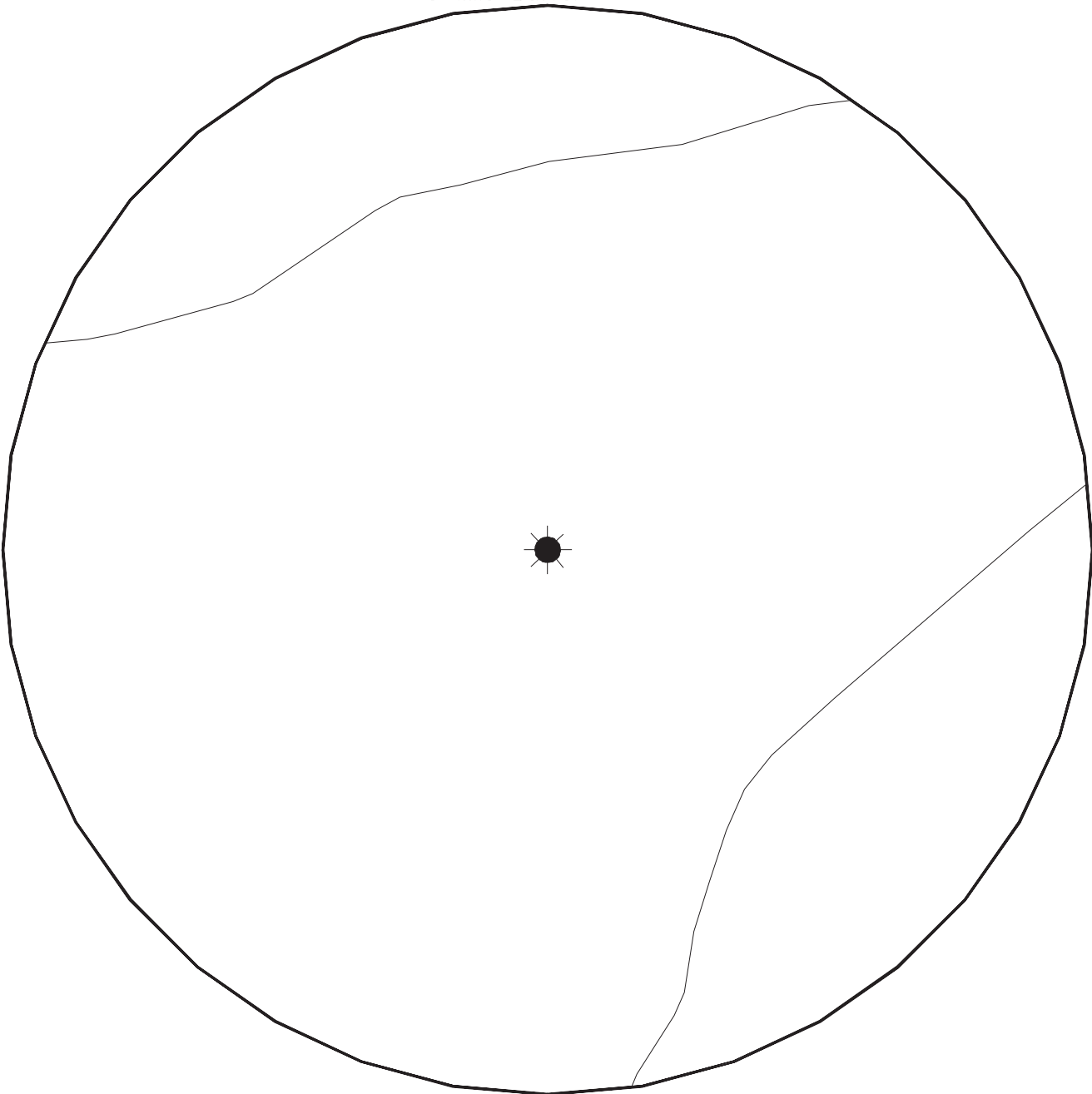
AREA WIDE 1994 TRI EMISSION PROFILE

FORD MOTOR CO
LORAIN COUNTY, Ohio

Latitude: 41 29 7
Longitude: 82 3 50



3 Mile Buffer



Number without a Symbol denotes no reported emissions over 0.5 pounds per year

1994 TRI EMISSIONS (LB/YEAR) AT FACILITIES WITHIN THREE MILES OF
FORD MOTOR CO TRI NO: 44012FRDMT650MI

Chemical Name	Air Fugitive (Non-Point Source) Emissions	Air Stack (Point Source) Emissions	Discharge to Surface Water	On-Site Land Disposal	TOTAL RELEASES	Discharge to POTW	Transfer	TOTAL TRANSFERS
FORD MOTOR CO. OHIO ASSEMBLY PLANT			SIC DESCRIPTION: MOTOR VEHICLES & CAR BODIES		MAP LOCATION NO:			
650 MILLER RD.			SIC CODE: 3711					
AVON LAKE	OH 44012							
METHANOL	1,200	65,000	0	0	66,200	0	750	750
N-BUTYL ALCOHOL	730	140,000	0	0	140,730	0	79,750	79,750
BENZENE	0	50	0	0	50	0	11	11
METHYL ETHYL KETONE	5,000	22,000	0	0	27,000	0	25,720	25,720
1,2,4-TRIMETHYLBENZENE	8	1,600	0	0	1,608	0	27,550	27,550
ETHYLBENZENE	130	26,000	0	0	26,130	0	152,815	152,815
ETHYLENE GLYCOL	0	0	0	0	0	2,100	870	2,970
METHYL ISOBUTYL KETONE	470	93,000	0	0	93,470	0	265,150	265,150
TOLUENE	140	28,000	0	0	28,140	0	13,560	13,560
CYCLOHEXANE	0	2	0	0	2	0	22	22
PROPYLENE	0	5	0	0	5	0	0	0
DI(2-ETHYLHEXYL) PHTHALATE	0	0	0	0	0	0	1,600	1,600
XYLENE (MIXED ISOMERS)	2,300	450,000	0	0	452,300	0	744,300	744,300
METHYL TERT-BUTYL ETHER	0	490	0	0	490	0	55	55
ANTIMONY COMPOUNDS	0	0	0	0	0	1	1,103	1,104
BARIUM COMPOUNDS	0	9	0	0	9	110	4,007	4,117
GLYCOL ETHERS	2,600	160,000	0	0	162,600	38,000	40,090	78,090
LEAD COMPOUNDS	0	0	0	0	0	420	4,913	5,333
MANGANESE COMPOUNDS	0	0	0	0	0	4,100	13,700	17,800
NICKEL COMPOUNDS	0	0	0	0	0	950	3,150	4,100
ZINC COMPOUNDS	250	0	0	0	250	1,300	20,510	21,810
SUBTOTALS	12,828	986,156	0	0	998,984	46,981	1,399,626	1,446,607

Ford Motor Company

Avon Lake Lorain County, Ohio

Latitude: 41 29 7 N
Longitude: 82 3 50 W

- MAP KEY:
-  County Boundries

 Inter State Highway

 US Highway

 Rail Road

 One Mile

 Three Miles


 Five Miles
- POPULATION DENSITY / SQ. MILE
-  Greater than 10000


 1000 - 10000


 100 - 1000


 10-100


 1-10


- Minority, poverty, and High School
Incomplete percentages
-  Greater than 50

 40 - 50

 30 - 40

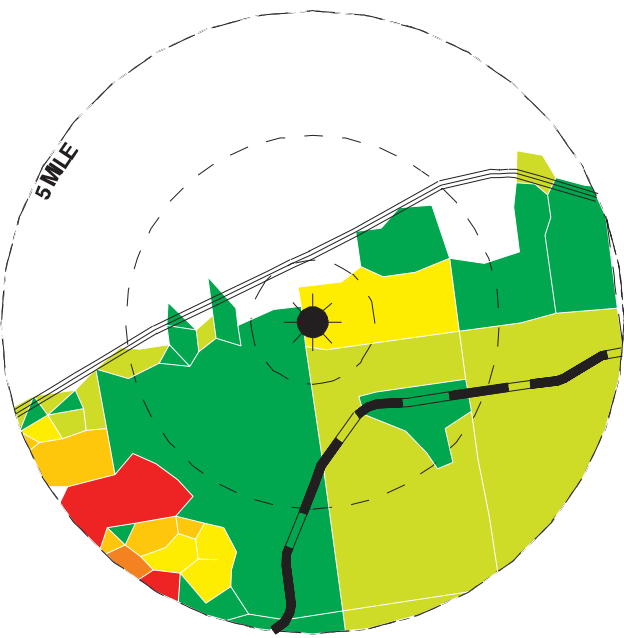
 20 - 30

 10 - 20

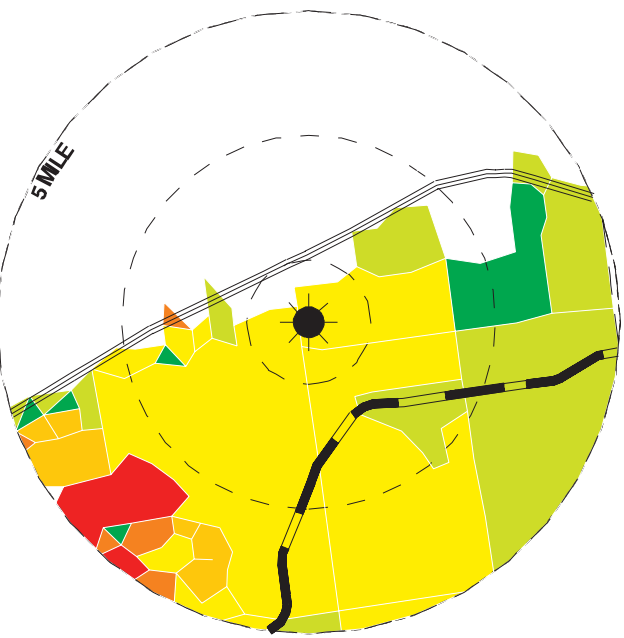
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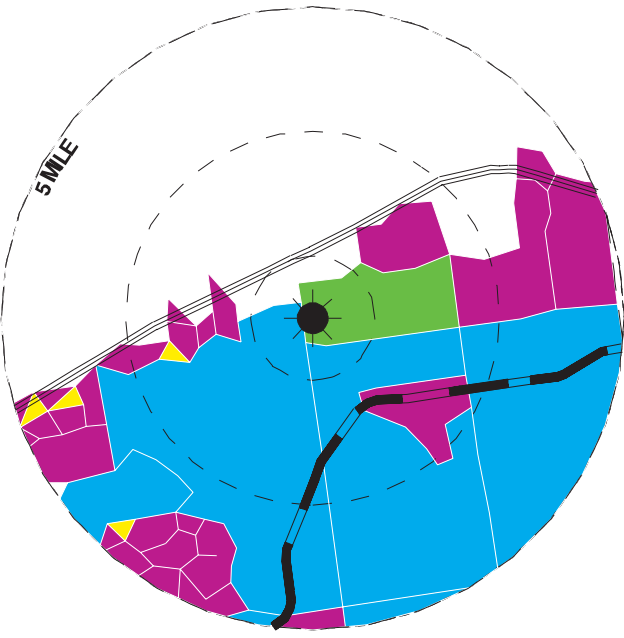
Percentage of Total Population
Below Poverty Level



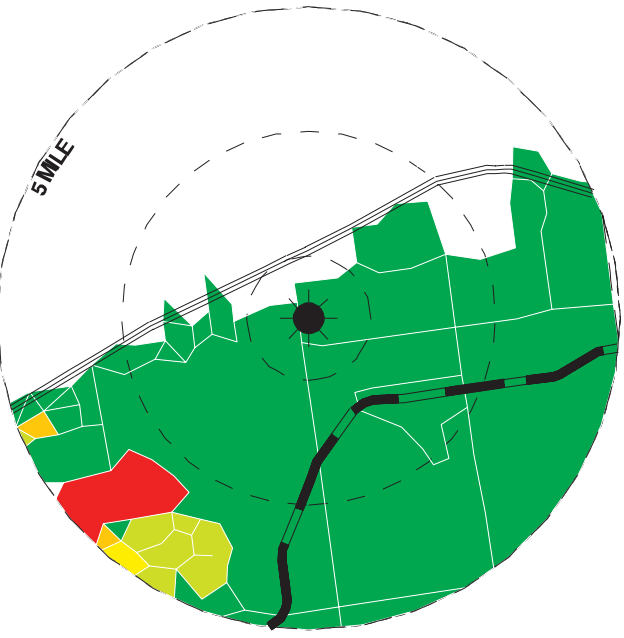
Percentage of Population not
Completing High School



Population Density
People Per Sq. Mile



Minority Population
Percent of Total Population



Ford Motor Company

Avon Lake Lorain County, Ohio

Latitude: 41 29 7 N
Longitude: 82 3 50 W

MAP KEY:

POPULATION DENSITY / SQ. MILE

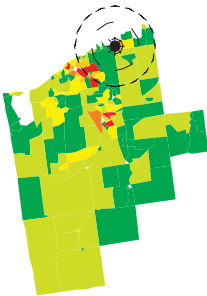
- County Boundries
- Inter State Highway
- US Highway
- Rail Road
- One Mile
- Three Miles
- Five Miles

- Greater than 10000
- 1000 - 10000
- 100 - 1000
- 10-100
- 1-10

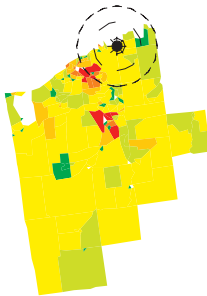
- Minority, poverty, and High School Incomplete percentages
- Greater than 50
 - 40 - 50
 - 30 - 40
 - 20 - 30
 - 10 - 20
 - 0 - 10



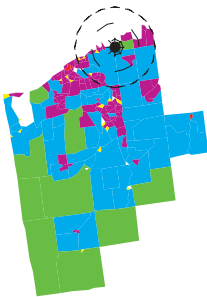
Percentage of Total Population Below Poverty Level



Percentage of Population not Completing High School



Population Density People Per Sq. Mile



Minority Population Percent of Total Population

